



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/824,585

04/15/2004

Sung-Su Jung

8734.291.00 US

6636

30827 7590 06/20/2008  
MCKENNA LONG & ALDRIDGE LLP  
1900 K STREET, NW  
WASHINGTON, DC 20006

EXAMINER

TUROC, DAVID P

ART UNIT

PAPER NUMBER

1792

MAIL DATE

DELIVERY MODE

06/20/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/824,585	<b>Applicant(s)</b> JUNG ET AL.	
	<b>Examiner</b> DAVID TUROCY	<b>Art Unit</b> 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 February 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) 1-11 and 34-40 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/14/08, 2/1/05</u> .   | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION*****Election/Restrictions***

1. Applicant's election of claims 12-33 in the reply filed on 2/14/08 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

***Double Patenting***

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 12-33 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 10-16 of copending Application No. 10/699854. Application 10/699854 discloses all the limitations of the instant invention, except using a first and second camera,

Art Unit: 1792

however Application 10/699854 discloses a first camera and a first and second alignment mark and therefore it would have been obvious to one of ordinary skill in the art to have used a first and second camera in the process of Application 10/699854 with a reasonable expectation of success.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

4. Claims 12-15, 26-30 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 10-16 of copending Application No. 10/717717 in view of ASA. Application 10/717717 discloses all the limitations of the instant invention, except using a first and second camera and attaching an alignment plate to the table having a mark, however ASA discloses using a first camera and therefore taking the references collectively, it would have been obvious to one of ordinary skill in the art to have used a first and second camera in the process of Application 10/699854 with a reasonable expectation of success.

Additionally, 10/717717 discloses a first and second dummy substrate, but fails to disclose providing an alignment plate on a table having a mark, however, it would have been obvious and predictable to have modified 10/717717 in view of ASA to have placed a first dummy substrate and create a first alignment mark (i.e. a table with a mark) and thereafter place a second dummy substrate (alignment plate) on the table with an alignment mark thereon.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 26-33 are rejected under 35 U.S.C. 102(b) as being anticipated by the admitted state of the art as taught by applicants disclosure, hereinafter ASA.

ASA discloses, at figures 4A-4F and accompanying text in disclosure, detecting the position of a first and second alignment mark, on an alignment plate on a table, using a first and second camera, moving the substrate in X and Y direction to align positions as required by the claims. ASA discloses (0023 of printed publication) seal patterns are thereafter formed on the substrate after aligning the syringes. ASA discloses LCD substrates, which are placed on the table and can therefore be considered coplanar with the dummy substrate.

Claims 32-33: Figure 3 discloses seal patterns as being known as having open and closed loop patterns.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 1792

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 12-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over ASA in view of JP05-345160 A by Katsuyoshi, hereafter JP '160.

ASA teaches all that is discussed above, including, aligning the substrate onto a table, wherein the table has an alignment mark, and the syringes are lowered so that the nozzles just come into contact with the surface of the aligning substrate. Then the aligning substrate is unloaded, a LCD substrate is loaded on the table, and a seal pattern is formed on the LCD substrate [0016], such a process is repeated for various substrates. The table can be moved in the left/right and forward/backward directions [0013].

AAPA does not explicitly teach that the aligning substrate can be attached to a side surface of the table. However, Onuma teaches a method of aligning a dispenser to forming a sealant layer on a LCD substrate. An aligning substrate 6 is used to achieve proper nozzle alignment. The nozzle can contact the aligning substrate while the LCD substrate is loaded on the table. Onuma reasonably teaches the use of a fixed aligning substrate that is not required to be loaded/unloaded on the table. It would have been obvious to one of ordinary skill in the art at the time of invention to have provided a fixed aligning substrate in the method of AAPA with a reasonable expectation of success because Onuma teaches that such a method of aligning is operable in the LCD deposition art.

Art Unit: 1792

Onuma displays in Fig. 4 that the aligning substrate 6 is positioned close to a table on which the substrate 2 is placed, but does not explicitly teach that the aligning substrate is attached to a side surface of the table. However, the nozzle contacts the aligning substrate while the LCD substrate has been loaded onto the table, so the table must be moved so that the position of the nozzle can be moved from the aligning substrate to the LCD substrate. The distance that the table must move can be reduced as the aligning substrate is positioned closer to the table, thereby increasing productivity. Attaching the aligning substrate to the table would allow for the smallest distance between the nozzle and the substrate. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have attached the aligning substrate to the table in the method of Onuma with a reasonable expectation of success. One would have been motivated to do so in order to have increased productivity.

Claim 13-14: ASA discloses moving the table and moving the camera (figure 4F) to align the marks as required by the claim.

Claim 15-16: these claims are discussed above.

Claim 17-18: The process as taught by ASA in view of Onuma will necessarily be completed multiple occasions (see ASA AT 0024), therefore the alignment plate will be attached before and after loading an LCD substrate as required by the claim.

Claim 19-21: These claims are discussed above.

Claim 22: ASA in view of Onuma fails to disclose a third alignment mark, however, ASA disclose using alignment marks to align syringes and providing a

Art Unit: 1792

third alignment mark as well detecting images of third image would have been obvious to one of ordinary skill in the art because one of ordinary skill in the art would recognize that additional readings for aligning a dispenser would be advantageous to achieve the desired results.

Claim 23: Onuma discloses ascending and descending the syringe.

Claim 24: This claim is discussed above.

Claim 25: ASA discloses alignment marks having a cross section, i.e. horizontal and vertical patterns (figures).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID TUROCY whose telephone number is (571)272-2940. The examiner can normally be reached on Monday-Friday 8:30-6:00, No 2nd Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 1792

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David Turocy/  
Examiner, Art Unit 1792

/Timothy H Meeks/  
Supervisory Patent Examiner, Art Unit 1792